A

Please type a plus (+) inside this box - +

PTO

PTO/SB/29 (12/97)

Approved for use through 09/30/00. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	8449-134	Total Pages	197

First Named Inventor or Application Identifier

PRAMOD K. SRIVASTAVA

Express Mail Label No.

EL 501 635 817 US



APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.					A	DDRESS TO: Box Patent Application Washington, DC 20231
1.		ee Transmittal Form Submit an original, and a duplicate for fee processing)				Microfiche Computer Program (Appendix)
2.	X \$		al Pages <u>102</u>]	7.		Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
	-	Descriptive title of the Invention			_	□ Computer Readable Copy
	_	Cross Reference to Related Applications			a.	Computer Readable Copy
	-	Statement Regarding Fed sponsored R&D			b.	□ Paper Copy (identical to computer copy)
	-	Reference to Microfiche Appendix				, , , , , , , , , , , , , , , , , , , ,
	-	Background of the Invention			c.	 Statement verifying identity of above copies
	_	Brief Summary of the Invention				ACCOMPANYING APPLICATION PARTS
222	_	Brief Description of the Drawings (if filed)		<u> </u>		ACCOMPANYING APPLICATION PARTS
-Detailed Description of the Invention (including drawings, if filed)		8. Assignment Papers (cover sheet & document(s))				
74.	-	Claim(s) Abstract of the Disclosure		9.		37 CFR 3.73(b) Statement ⊠ Power of Attorney (when there is an assignee)
3.U.I	8 [Prawing(s) (35 USC 113) [Total	al Sheets 91]	10.		English Translation Document (if applicable)
1. [].	× (Oath or Declaration (unexecuted) [Total	al Sheets 2]			Information Disclosure Copies of IDS Statement (IDS)/PTO-1449 Citations
*e, #	а. 🗆	Newly executed (original or copy)	12.		Preliminary Amendment	
Mann III	b. Copy from a prior application (37 CFR 1.63(d))					Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
Jesā		[Note Box 5 below]		14.		Small Entity Statement filed in prior application,
7	I.	□ <u>DELETION OF INVENTORS(S)</u>				Statement(s) Status still proper and desired
And And		Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33 (b).				Certified Copy of Priority Document(s) (if foreign priority is claimed)
	נו כ	ncorporation By Reference (useable if Box 4b is checked)		16.		Other:
	1	he entire disclosure of the prior application, from which a r declaration is supplied under Box 4b, is considered as b	copy of the oath			
	d	isclosure of the accompanying application and is hereby in	ncorporated by			
	re	eference therein.				
7.	lf a □ C	CONTINUING APPLICATION, check appropriate box and ontinuation Divisional Continuation-in-part (d supply the requisi (CIP) of prior a	ite inf	orn atio	nation: on No: 09/668,724 filed September 22, 2000.
		18. COR	RESPONDENCE A			

⊠	Cus	tomer Number or Bar Code Label (Insert Customer	20583 r No. or Attach bar (code	lab	el here) or □ Correspondence address below
	_					
IAM	E					
			····			
	RES	5				
YTIC	,		STATE			ZIP CODE
OU	NTR	Y	TELEPHONE		-	FAX
		- 				1

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

PENNIE & EDMONDS LLP

COUNSELLORS AT LAW 1155 Avenue of the Americas New York, N.Y. 10036-2711 (212) 790-9090

ATTORNEY DOCKET NO. 8449-134

Assistant Commissioner for Patents Box PATENT APPLICATION Washington, D.C. 20231 Date: December 28, 2000



Sir:

The following utility patent application is enclosed for filing:

Applicant(s): PRAMOD K. SRIVASTAVA

Executed on: Unexecuted

Title of Invention: ALPHA (2) MAG

ALPHA (2) MACROGLOBULIN RECEPTOR AS A HEAT SHOCK PROTEIN RECEPTOR AND

USES THEREOF

PATENT APPLICATION FEE VALUE

TYPE	NO. FILED	LESS	EXTRA	EXTRA RATE	j	FEE
Total Claims	116	-20	96	\$18.00 each	\$	1,728.00
Independent	29	-3	26	\$80.00 each	\$	2,080.00
The state of the s			Minimum Fee		\$	710.00
	Multiple Dependency Fee If Applicable (\$270.00)					270.00
	Total				\$	4,788.00
	50% Orga as to	- \$	0.00			
				Total Filing Fee	· \$	4,788.00

Priority of application no. filed on in is claimed under 35 U.S.C. § 119.

The certified copy of the priority application has been filed in application no. filed

Amend the specification by inserting before the first line the following sentence: This is a continuation-in-part of application no. 09/668,724 filed on September 22, 2000.

Please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is

enclosed.

Respectfully submitted,

Adriane M. Antler

32605

PENNIE & EDMONDS LLP

(Reg. No.)

y Her

Enclosure

This form is not for use with continuation, divisional, re-issue, design or plant patent applications.

01/04/2001 EGRETCH1 00000052 161150 09750972

01 FC:101 710.00 CH 02 FC:102 2080.00 CH 03 FC:103 1728.00 CH 04 FC:104 270.00 CH

NY2 - 1153831.1

Express Mail No. <u>EL 501 635 817 US</u>
Attorney Docket No.: <u>8449-134</u>

ALPHA (2) MACROGLOBULIN RECEPTOR AS A HEAT SHOCK PROTEIN RECEPTOR AND USES THEREOF

5

TABLE OF CONTENTS

1. INTROD	UCTION 1
2. BACKGR	COUND OF THE INVENTION
2.1. I	HEAT SHOCK PROTEINS 1
2.2. I	MMUNOGENICITY OF HSP-PEPTIDE COMPLEXES 2
3. SUMMAI	RY OF THE INVENTION 7
4. BRIEF DI	ESCRIPTION OF THE FIGURES
5. DETAILE	D DESCRIPTION OF THE INVENTION
5.1	COMPOSITIONS OF THE INVENTION
	5.1.1 RECOMBINANT EXPRESSION
	5.1.3 ANTIBODIES SPECIFIC FOR α2M RECEPTOR-HSP
	COMPLEXES 25
5.2	ASSAYS FOR THE IDENTIFICATION OF COMPOUNDS THAT
	INTERACT WITH THE α2M RECEPTOR
	5.2.1 α2M RECEPTOR-LIGAND BINDING ASSAYS
	5.2.2 α2M RECEPTOR ACTIVITY ASSAYS
	5.2.3 COMPOUNDS THAT CAN BE SCREENED IN ACCORDANCE
	WITH THE INVENTION 40
5.3	IDENTIFICATION OF FRAGMENTS OF THE α2M RECEPTOR AND/OR
	α2M RECEPTOR LIGANDS, SUCH AS HSPS, USEFUL FOR
	IMMUNOTHERAPY 43
5.4	DRUG DESIGN
5.5	DIAGNOSTIC USES 49
5.6	THERAPEUTIC USES 52
	5.6.1 THERAPEUTIC USE OF IDENTIFIED AGONISTS AND
	ANTAGONISTS 52
	 BACKGR I I I I SUMMAN BRIEF DI DETAILE 1 5.2 5.3 5.4 5.5 5.5

Express Mail No. <u>EL 501 635 817 US</u> Attorney Docket No.: <u>8449-134</u>

		5.6.2	THERAPEUTIC USE OF THE α2M RECEPTOR AGAINST	
			CANCER AND INFECTIOUS DISEASES	59
5		5.6.3	GENE REPLACEMENT THERAPY	66
		5.6.4	DELIVERY OF SOLUBLE α2M RECEPTOR POLYPEPTIDES	67
		5.6.5	DELIVERY OF DOMINANT NEGATIVE MUTANTS	68
		5.6.6	EXTRACORPOREAL METHODS FOR MODULATING THE	
			IMMUNE RESPONSE	68
10	5.7	TARG	ET AUTOIMMUNE DISEASES	71
	5.8	TARG	ET INFECTIOUS DISEASES	72
	5.9	TARG	ET PROLIFERATIVE CELL DISORDERS	73
	5.10	PHAR	MACEUTICAL PREPARATIONS AND METHODS OF	
		ADMI	NISTRATION	73
15		5.10.1	EFFECTIVE DOSE	74
		5.10.2	FORMULATIONS AND USE	74
6.	EXAN	MPLE: I	DENTIFICATION OF α2M RECEPTOR AS AN HSP RECEPTOR	
				76
20	6.2	MATE	ERIALS AND METHODS	77
	6.3	RESU	LTS	80

25

30

35